Alanine (Ala/A)	соо- н <sub>3</sub> n—с—н сн <sub>3</sub> Nonpolar, aliphatic R Groups
Arginine (Arg/R)	Coo- H <sub>3</sub> N-C-H  CH2 CH2 CH2 CH2 CH2 NH C=NH2 NH2 NH2 Positively charged R groups
Asparagine (Asn/N)	COO- H₃Ñ—C—H CH₂ C H₂NOO Polar, uncharged R groups
Aspartate (Asp/D)	COO <sup>-</sup> H₃N — C — H CH₂ COO <sup>-</sup> Negatively charged R groups
Cysteine (Cys/C)	COO <sup>-</sup> H₃N — C — H CH₂ SH  Polar, uncharged R groups

Glutamate (Glu/E)	COO- H <sub>3</sub> N-C-H CH <sub>2</sub> CH <sub>2</sub> CCOO- COO- Negatively charged R groups
Glutamine (Gln/Q)	COOT H <sub>3</sub> N — C — H CH <sub>2</sub> CH <sub>2</sub> H <sub>2</sub> N O Polar, uncharged R groups
Glycine (Gly/G)	COO⁻ H₃Ñ—C —H H Nonpolar, aliphatic R Groups
Histidine (His/H)	coo⁻  H₃Ň−c−H  CH₂  c−NH  CH₂ c−NH  CH C
Isoleucine (Ile/I)	COO- H <sub>3</sub> N-C-H H-C-CH <sub>3</sub> CH <sub>2</sub> CH <sub>3</sub> CH <sub>3</sub> Nonpolar, aliphatic R Groups

Leucine (Leu/L)	COO-  H <sub>3</sub> N-C-H  CH <sub>2</sub> CH  CH  CH <sub>3</sub> CH  CH  CH  CH  CH  CH  CH  CH  CH  C
Lysine (Lys/K)	соо- н, n – c – н Сн2 Сн2 Сн2 Сн2 Сн2 Сн2 Сн3 Чин, Positively charged R groups
Methionine (Met/M)	соо- н <sub>3</sub> Ň-с-н сн <sub>2</sub> сн <sub>2</sub> сн <sub>2</sub> s сн <sub>3</sub> Nonpolar, aliphatic R Groups
Phenylalanine (Phe/F)	COOT H <sub>3</sub> N-C-H CH <sub>2</sub> CH <sub>2</sub> Aromatic R groups
Proline (Pro/P)	COO- H <sub>2</sub> N CH <sub>2</sub> H <sub>2</sub> C — CH <sub>2</sub> Nonpolar, aliphatic R Groups

Serine (Ser/S)	COOTH <sub>3</sub> N-C-H CH <sub>2</sub> OH Polar, uncharged R groups
Threonine (Thr/T)	COO- H <sub>3</sub> N-C-H H-C-OH CH <sub>3</sub> Polar, uncharged R groups
Tryptophan (Trp/W)	COO- H <sub>3</sub> N-C-H CH <sub>2</sub> C=CH NH Aromatic R groups
Tyrosine (Tyr/Y)	соо- н <sub>3</sub> n — с — н сн <sub>2</sub> он Aromatic R groups
Valine (Val/V)	COO-  H <sub>3</sub> N-C-H  CH  CH <sub>3</sub> CH <sub>3</sub> Nonpolar, aliphatic R Groups